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REPORTS ON INTER-SESSIONAL ACTIVITIES

EMISSIONS RESULTING FROM FUEL USED FOR INTERNATIONAL TRANSPORTATION

I. INTRODUCTION

A. Mandate

1. The Kyoto Protocol in Article 2, paragraph 2, states that "Annex I Parties shall pursue limitation and reduction of emissions of greenhouse gases not controlled by the Montreal Protocol from aviation and marine bunker fuels, working through the International Civil Aviation Organization (ICAO) and the International Maritime Organization (IMO)".

2. The SBSTA, at its tenth session, invited ICAO and IMO to inform it of their work plans relating to emissions based on fuel sold to ships or aircraft engaged in international transport and to provide regular progress reports at future sessions of the SBSTA (FCCC/SBSTA/1999/6, para. 46 (d)).

3. The Conference of the Parties (COP), by its decision 18/CP.5, requested the secretariat to continue to develop its cooperation with ICAO and IMO and to participate in their meetings on climate change related issues (FCCC/CP/1999/6/Add.1).

4. The SBSTA, at the first part of its thirteenth session, encouraged ICAO and IMO to complete their work on this matter as soon as possible. It further noted the importance of coordination by Parties at the national level of their work related to emissions of greenhouse gases from international aviation and shipping under the UNFCCC, ICAO and IMO (FCCC/SBSTA/2000/10, para. 45 (b)).

5. On the issue of reporting international emissions, the SBSTA, at its eleventh session, affirmed that the accuracy, consistency and comparability of data on emissions based upon fuel

sold to ships and aircraft engaged in international transport as reported by Parties need to be improved. The SBSTA welcomed the work of the IPCC on good practices, including those related to the preparation of inventories of emissions based upon fuel sold to ships and aircraft engaged in international transport (FCCC/SBSTA/1999/14, para. 56 (c)).

6. At the same session, it further noted that use of the guidelines for the preparation of national communications by Parties included in Annex I to the Convention, part I: UNFCCC reporting guidelines on annual inventories, including the common reporting format (FCCC/CP/2000/7), would improve the quality of inventory data provided under the Convention. The SBSTA requested the secretariat to include in any report on the experience of Parties using the common reporting format, information on the reporting of emissions based upon fuel sold to ships and aircraft engaged in international transport (FCCC/SBSTA/1999/14, para. 56 (c)).

7. The SBSTA, at its eleventh session, decided to consider the methodological aspects related to emissions based upon fuel sold to ships and aircraft engaged in international transport contained in the IPCC *Report on Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories*, at the SBSTA session following the approval of that report (FCCC/SBSTA/1999/14, para. 56 (e)).

B. Scope of the note

8. This note provides an overview and update of the activities within ICAO and IMO and by the UNFCCC secretariat related to greenhouse gas emissions from aviation and shipping. It was prepared in collaboration with the IMO and ICAO secretariats, which provided the text for the updates relating to their respective organizations. It replaces the progress reports by these organizations which are due for this session of the SBSTA.

C. Possible action by the SBSTA

9. The SBSTA may wish to take note of the information contained in this document in the preparation of a detailed discussion at the fifteenth session of the SBSTA.

II. CONSIDERATIONS WITHIN IMO

10. **Decision-making structure.** The Marine Environment Protection Committee (MEPC) is responsible for this issue within IMO. It considers any matter within the scope of IMO relating to the prevention and control of marine pollution from ships. It meets approximately every eight months and reports to the Council of IMO.

11. **Past deliberations.** In November 1998, the MEPC decided to prepare a study on greenhouse gases from ships. The task was assigned to a consortium of institutions. The study was presented at the forty-fifth session of the MEPC in September 2000. Due to the heavy workload before the committee, consideration of the study was postponed to the forty-sixth session of the MEPC in April 2001, but a mandate was given to a sub-committee to undertake a technical evaluation of the study. This evaluation noted, *inter alia*, that short-term measures to limit or reduce greenhouse gas emissions may only be introduced on a voluntary basis; long-term measures should only be introduced after careful consideration by the IMO, based on a holistic approach taking into account the cost-benefits to the shipping industry and the development of more detailed global bunker consumption statistics.

12. **Latest conclusions.** The MEPC, at its forty-sixth session in April 2001, decided to form a working group at the next session, which would consider the issue, and to request members to submit written proposals to facilitate the work of the working group. The terms of reference for this working group are:

(a) To evaluate proposals for greenhouse gas emissions reduction contained in the IMO study on greenhouse gas emissions from ships;

(b) To collate and evaluate information submitted by members;

(c) To identify appropriate sub-committees for involvement;

(d) To draw up a work plan; and

(e) To prepare materials for consideration in developing an IMO strategy for greenhouse gas reduction.

13. **Future work.** The MEPC, which includes the working group on greenhouse gases from ships, will meet again in March 2002 for its forty-seventh session.

III. CONSIDERATIONS WITHIN ICAO

14. **Decision-making structure.** The Committee on Aviation Environmental Protection (CAEP) is the expert group responsible for this issue within the ICAO. Established in 1983, it deals with both aircraft noise and aircraft engine emissions. Nineteen ICAO contracting States are members of CAEP and two have observer status. Intergovernmental organizations, industry associations, and environmental non-governmental organizations also participate as observers. CAEP reports to the Council, which is the permanent governing body of ICAO and is composed of 33 contracting States elected by the ICAO Assembly for 3 years. The Council is responsible to the Assembly, which is the sovereign body of ICAO and includes all 187 contracting States. The next meeting of the Assembly is in September 2001.

15. **Past deliberations.** ICAO had requested the IPCC in 1996 to prepare a report on the atmospheric impact of aircraft engine emissions. This report, which was prepared in collaboration with the Scientific Assessment Panel to the Montreal Protocol, with some technical input from ICAO, was published in 1999.[1]

16. The CAEP at its fourth meeting in 1998 established three working groups to consider different aspects of aircraft engine emissions, namely further development of technology and related world-wide standards, reducing fuel burn through improved operational measures, and exploring the potential role of market-based options. These groups met regularly and prepared information for consideration by the CAEP at its fifth meeting.

17. **Latest conclusions.** At its fifth meeting, in January 2001, the CAEP reviewed progress.

(a) On technology and standards, the CAEP endorsed continuing methodological work on calculating emissions in the climb and cruise phases of flight. It decided not to pursue

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[1] Intergovernmental Panel on Climate Change, "Aviation and the global atmosphere", Cambridge University Press, 1999, ISBN 0-521-66404-7.

the possibility of an ICAO standard limiting carbon dioxide, concluding that this would be very difficult in view of the great diversity of operations and noting that market pressures already ensured that aircraft are very fuel-efficient.

(b) On operational measures, the CAEP endorsed guidance material on operational opportunities to minimize fuel use and reduce emissions, for publication by ICAO. It also endorsed a methodology for estimating fuel savings and reductions in emissions to be derived from implementing new satellite-based Communications, Navigation, Surveillance and Air Traffic Management (CNS/ATM) systems. This methodology is now being included in ICAO's Global Air Navigation Plan and steps are being taken to promote awareness of the environmental benefits associated with CNS/ATM implementation.

(c) On market-based options, the CAEP discarded closed emissions trading as an option and called for further work on the development of an open emissions trading system for international aviation. ICAO would play a leadership role, particularly regarding proposals for caps. Voluntary agreements could be a first stage to encourage near-term action, as a lead-in to a future regime. Charges are considered as shorter-term options on which further work is also needed.

18. A CAEP Action Plan on Aircraft Engine Emissions was approved and a new work programme for the CAEP and its working groups was adopted. This gives high priority to the development of guidance on voluntary mechanisms, identification and calculation of emissions related costs and their application, and how revenues could be distributed. The CAEP is urged to coordinate with UNFCCC on any process to link an open emissions trading system to the Kyoto mechanisms; it is also urged to consider possible targets for aviation and to develop the key elements of an emissions trading system. The effects of the options on developing countries would be further studied.

19. In March 2001, the Council reviewed the results of CAEP 5, noted the CAEP Action Plan and approved the new work programme for the CAEP.

20. **Future work.** In September, the Council will report to the ICAO Assembly on the progress made on greenhouse gas emissions. The Council will also present proposals to update Assembly Resolution A32-8 (Consolidated statement of continuing ICAO policies and practices related to environmental protection), in the light of the above conclusions.

21. The CAEP working groups will continue to meet regularly to pursue the new CAEP work programme.

IV. ACTIVITIES BY THE UNFCCC SECRETARIAT

22. The UNFCCC secretariat attended several meetings of ICAO and IMO. It made several presentations on the status of the climate change negotiations. The UNFCCC secretariat also provides and maintains a web page on the issue, where further information can be found, for example, the full text of the IMO study on greenhouse gases from ships.[2]

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[2] http://www.unfccc.int/issues/emissres.html

23. Issues related to the quality of reporting of emissions from international bunker fuels are being addressed in the current trial period for the technical review of inventories (decision 6/CP.5). The IPCC good practice guidance contains further information on methods to estimate emissions from fuel sold for international transport.[3] A report on the use of the reporting guidelines for annual inventories, including the common reporting format, and the use of the IPCC good practice guidance, as mandated by decision 5/CP.5 and the SBSTA at its twelfth session, will be made available by the secretariat at the fifteenth session. This report will include information on the reporting of emissions from international bunker fuels.

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[3] Information on methods to estimate emissions from fuel sold for international transport may be found in chapter 2, pages 2.51 to 2.69. The full report is available on the IPCC web site at http://www.ipcc-nggip.iges.or.jp/public/gp/gpgaum.htm. Annex I Parties have been urged, to the extent possible, to apply the IPCC good practice for inventories due in 2001 and 2002 and use it for inventories due in 2003 and beyond. Annex I Parties with economies in transition may phase in the good practice guidance two years later than other Annex I Parties.